LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1. **(Currently Amended)** A method comprising:
receiving information indicating a need to change an amount of data being
transmitted through a first media access control (MAC) device to a client
of the first MAC device, wherein
the information is received from the client when the client determines that
the client is receiving data at a rate exceeding a set threshold;
forming a message including an indication to a second MAC device to change a
rate at which the second MAC device transmits data **to the client**, wherein
said forming the message uses the information indicating the need to
change the amount of data being transmitted to the client**, and**
a total bandwidth allocation of the first MAC device is unaffected by
said change; and
transmitting the message to the second MAC device over a network.

2. (Original) The method of claim 1 wherein the network is a metropolitan area network (MAN).

3. (Original) The method of claim 1 wherein the network is a resilient packet ring (RPR) network.

4. (Original) The method of claim 1 wherein the network includes a first datapath for transmitting data from the first MAC device to the second MAC device, and wherein the network includes a second datapath for transmitting data from the second MAC device to the first MAC device.

5. (Original) The method of claim 1 wherein the message is a resilient packet ring (RPR) fairness message.

6. (Original) The method of claim 1 further comprising:

determining an extent to which a data buffer associated with the client of the first MAC device contains data; and

preparing the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device based on the extent to which the data buffer associated with the client of the first MAC device contains data.

7. (Original) The method of claim 6 further comprising:

transmitting, to the first MAC device, the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device.

8. (Original) The method of claim 1 wherein the message further includes a MAC device address.

9. (Original) The method of claim 8 wherein the MAC device address corresponds to one of the first MAC device, the second MAC device, and another MAC device.

10. (Original) The method of claim 1 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes at least one of: a MAC device address, a data transmission rate, a ramp factor, and a flag.

11. (Original) The method of claim 1 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes a data transmission rate, the method further comprising:

determining the data transmission rate.

12. (Original) The method of claim 11 wherein the determining the data transmission rate further comprises at least one of:

calculating the data transmission rate;

selecting a value for the data transmission rate; and

determining a ramp factor.

13. (Original) The method of claim 1 further comprising:

transmitting the message from the second MAC device to a third MAC device.

14. (Original) The method of claim 1 wherein the first MAC device is part of a first resilient packet ring (RPR) station and wherein the second MAC device is part of a second RPR station.

15. (Original) The method of claim 1 wherein the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device includes at least one of: a data transmission rate, a counter value, a message indicating that a buffer threshold has been exceeded, and a signal from the client of the first MAC.

16. (Original) The method of claim 1 wherein:

the information indicating the need to change the amount of data being

transmitted through the first MAC device to the client of the first MAC

device further comprises at least one of: information indicating the need to

reduce the amount of data being transmitted, and information indicating

the need to increase the amount of data being transmitted; and

the indication to the second MAC device to change the rate at which the second

MAC device transmits data further comprises at least one of: an indication

to the second MAC device to reduce the rate at which the second MAC

device transmits data, and an indication to the second MAC device to

increase the rate at which the second MAC device transmits data.

17. (Previously Presented) The method of claim 1 encoded in a computer readable medium as instructions executable on a processor, the computer readable medium being one of an electronic storage medium, a magnetic storage medium, and an optical storage medium.

18. **(Currently Amended)** An apparatus comprising:

a first media access control (MAC) device operable to be coupled to a network,

the first MAC device including control logic configured to prepare a

message for transmission on the network**, wherein**

the message ~~including~~ **includes** an indication to change a rate at which

another MAC device transmits data **to a MAC client coupled to**

the first MAC device, and

a total bandwidth allocation of the first MAC device is unaffected by

said change; and

[[a]]**the** MAC client coupled to the first MAC device, wherein the MAC client

comprises

a buffer for storing data transmitted to the MAC client and

buffer control circuitry configured to provide information about an amount

of data stored in the buffer, wherein

the control logic is responsive to the information about the amount

of data stored in the buffer to prepare the message.

19. (Original) The apparatus of claim 18 wherein the network is a metropolitan area network (MAN).

20. (Original) The apparatus of claim 18 wherein the network is a resilient packet ring (RPR) network.

21. (Original) The apparatus of claim 18 further comprising:

a second MAC device, wherein the second MAC device is the another MAC

device;

a first datapath coupled between the first MAC device and the second MAC
device, the first datapath for transmitting data from the first MAC device
to the second MAC device; and

a second datapath coupled between the first MAC device and the second MAC
device, the second datapath for transmitting data from the second MAC
device to the first MAC device.

22. (Original) The apparatus of claim 21 wherein the first MAC device is further
operable to transmit the message to the second MAC device.

23. (Original) The apparatus of claim 21 wherein the second MAC device is
configured to transmit the message to a third MAC device.

24. (Original) The apparatus of claim 21 wherein the first MAC device is part of
a first resilient packet ring (RPR) station and wherein the second MAC device is part of a
second RPR station.

25. (Original) The apparatus of claim 18 wherein the message is a resilient
packet ring (RPR) fairness message.

26. (Original) The apparatus of claim 18 wherein the buffer control circuitry is
coupled to the control logic, and wherein the control logic is further configured to use the
information about the amount of data stored in the buffer to determine the indication to
change the rate at which another MAC device transmits data.

27. (Original) The apparatus of claim 18 wherein the message further includes a
MAC device address.

28. (Original) The apparatus of claim 27 wherein the MAC device address
corresponds to one of the first MAC device and the another MAC device.

PATENT

29. (Original) The apparatus of claim 18 wherein the indication to change the rate at which another MAC device transmits data includes at least one of: a MAC device address, a data transmission rate, a ramp factor, and a flag.

30. (Original) The apparatus of claim 18 wherein the control circuitry is further configured to determine at least one of a data transmission rate and a data transmission rate ramp.

31. (Original) The apparatus of claim 18 wherein the information about an amount of data stored in the buffer includes at least one of: a data transmission rate, a counter value, a message indicating that a buffer threshold has been exceeded, and a signal from the client of the first MAC.

32. (Original) The apparatus of claim 18 wherein MAC client further comprises packet processing circuitry coupled to the buffer.

33. (Original) The apparatus of claim 32 wherein the packet processing circuitry includes the buffer control circuitry.

34. (Original) The apparatus of claim 18 wherein the indication to change the rate at which another MAC device transmits data further comprises at least one of an indication to reduce the rate at which another MAC device transmits data, and an indication to increase the rate at which another MAC device transmits data.

35. **(Currently Amended)** An apparatus comprising:

a first media access control (MAC) device operable to be coupled to a network,

    the first MAC device comprises

        control logic configured to prepare a message for transmission on the network including an indication to change a rate at which another MAC device transmits data **to a MAC client coupled to the first MAC device, wherein**

- 7 -

a total bandwidth of the first MAC device is unaffected by said
change;

[[a]]the MAC client coupled to the first MAC device, **wherein** the MAC client
comprises

a buffer for storing data transmitted to the MAC client, and

buffer control circuitry configured to provide information about an amount
of data stored in the buffer to the control logic, wherein
the control logic is responsive to the information about the amount
of data stored in the buffer in preparation of the message
for transmission.

36. (Original) The apparatus of claim 35 wherein the network is at least one of a
metropolitan area network (MAN) and a resilient packet ring (RPR) network.

37. (Original) The apparatus of claim 35 further comprising:

a second MAC device, wherein the second MAC device is the another MAC
device;

a first datapath coupled between the first MAC device and the second MAC
device, the first datapath for transmitting data from the first MAC device
to the second MAC device; and

a second datapath coupled between the first MAC device and the second MAC
device, the second datapath for transmitting data from the second MAC
device to the first MAC device.

38. (Original) The apparatus of claim 35 wherein the message is a resilient
packet ring (RPR) fairness message.

39. (Original) The apparatus of claim 35 wherein the buffer control circuitry is
coupled to the control logic, and wherein the control logic is further configured to use the
information about the amount of data stored in the buffer to determine the indication to
change the rate at which another MAC device transmits data.

40. (Original) The apparatus of claim 35 wherein the message further includes a MAC device address.

41. (Original) The apparatus of claim 35 wherein the indication to change the rate at which another MAC device transmits data includes at least one of: a MAC device address, a data transmission rate, a ramp factor, and a flag.

42. (Original) The apparatus of claim 35 wherein the control circuitry is further configured to determine at least one of a data transmission rate and a data transmission rate ramp.

43. (Original) The apparatus of claim 35 wherein the information about an amount of data stored in the buffer includes at least one of: a counter value and a signal indicating that a buffer threshold has been exceeded.

44. (Original) The apparatus of claim 35 further comprising:
a MAC client coupled to the first MAC device, the MAC client including packet processing circuitry operable to receive data from the buffer.

45. (Original) The apparatus of claim 35 wherein the indication to change the rate at which another MAC device transmits data further comprises at least one of an indication to reduce the rate at which another MAC device transmits data, and an indication to increase the rate at which another MAC device transmits data.

46. (Currently Amended) An apparatus comprising:
a first media access control (MAC) device coupled to a network;
a client of the first MAC device coupled to the first MAC device;
a means for receiving information indicating a need to change an amount of data
being transmitted through [[a]]the first media access control (MAC)
device to [[a]]the client of the first MAC device, wherein
the information is received from the client when the client determines that
the client is receiving data at a rate exceeding a set threshold;

a means for forming a message including an indication to a second MAC device to change a rate at which the second MAC device transmits data **to the client**, wherein

said means for forming the message uses the information indicating the need to change the amount of data being transmitted to the client, **and**

a total bandwidth allocation of the first MAC device is unaffected by said change; and

a means for transmitting the message to the second MAC device over [[a]]**the** network.

47. (Original) The apparatus of claim 46 wherein the network is at least one of a metropolitan area network (MAN) and a resilient packet ring (RPR) network.

48. (Original) The apparatus of claim 46 wherein the message is a resilient packet ring (RPR) fairness message.

49. (Original) The apparatus of claim 46 further comprising:

a means for determining an extent to which a data buffer associated with the client of the first MAC device contains data; and

a means for preparing the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device based on the extent to which the data buffer associated with the client of the first MAC device contains data.

50. (Original) The apparatus of claim 46 wherein the message further includes a MAC device address.

51. (Original) The apparatus of claim 46 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes at least one of: a MAC device address, a data transmission rate, a ramp factor, and a flag.

52. (Original) The apparatus of claim 46 wherein the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device includes at least one of: a data transmission rate, a counter value, a message indicating that a buffer threshold has been exceeded, and a signal from the client of the first MAC.

53. (Original) The apparatus of claim 46 wherein:

the information indicating the need to change the amount of data being

transmitted through the first MAC device to the client of the first MAC

device further comprises at least one of: information indicating the need to

reduce the amount of data being transmitted, and information indicating

the need to increase the amount of data being transmitted; and

the indication to the second MAC device to change the rate at which the second

MAC device transmits data further comprises at least one of: an indication

to the second MAC device to reduce the rate at which the second MAC

device transmits data, and an indication to the second MAC device to

increase the rate at which the second MAC device transmits data.

54. **(Currently Amended)** A computer readable medium comprising program instructions executable on a processor, the computer readable medium being at least one of an electronic storage medium, a magnetic storage medium, and an optical storage medium, wherein the program instructions are operable to implement each of:

receiving information indicating a need to change an amount of data being

transmitted through a first media access control (MAC) device to a client

of the first MAC device, wherein

the information is received from the client when the client determines that

the client is receiving data at a rate exceeding a set threshold;

forming a message including an indication to a second MAC device to change a

rate at which the second MAC device transmits data **to the client**, wherein

said forming the message uses the information indicating the need to

change the amount of data being transmitted to the client**, and**

- 11 -

a total bandwidth allocation of the first MAC device is unaffected by said change; and

transmitting the message to the second MAC device over a network.

55. (Original) The computer readable medium of claim 54 wherein the network is at least one of a metropolitan area network (MAN) and a resilient packet ring (RPR) network.

56. (Original) The computer readable medium of claim 54 wherein the message is a resilient packet ring (RPR) fairness message.

57. (Original) The computer readable medium of claim 54 further comprising program instructions operable to implement:

      determining an extent to which a data buffer associated with the client of the first MAC device contains data; and

      preparing the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device based on the extent to which the data buffer associated with the client of the first MAC device contains data.

58. (Original) The computer readable medium of claim 57 further comprising program instructions operable to implement:

      transmitting, to the first MAC device, the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device.

59. (Original) The computer readable medium of claim 54 wherein the message further includes a MAC device address.

60. (Original) The computer readable medium of claim 59 wherein the MAC device address corresponds to one of the first MAC device, the second MAC device, and another MAC device.

61. (Original) The computer readable medium of claim 54 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes at least one of: a MAC device address, a data transmission rate, a ramp factor, and a flag.

62. (Original) The computer readable medium of claim 54 wherein the indication to the second MAC device to change the rate at which the second MAC device transmits data includes a data transmission rate, the method further comprising:
    determining the data transmission rate.

63. (Original) The computer readable medium of claim 54 further comprising program instructions operable to implement at least one of:
    calculating the data transmission rate;
    selecting a value for the data transmission rate; and
    determining a ramp factor.

64. (Original) The computer readable medium of claim 54 further comprising program instructions operable to implement:
    transmitting the message from the second MAC device to a third MAC device.

65. (Original) The computer readable medium of claim 54 wherein the information indicating the need to change the amount of data being transmitted through the first MAC device to the client of the first MAC device includes at least one of: a data transmission rate, a counter value, a message indicating that a buffer threshold has been exceeded, and a signal from the client of the first MAC.

66. (Original) The computer readable medium of claim 54 wherein:
    the information indicating the need to change the amount of data being
        transmitted through the first MAC device to the client of the first MAC
        device further comprises at least one of: information indicating the need to
        reduce the amount of data being transmitted, and information indicating
        the need to increase the amount of data being transmitted; and

- 13 -

the indication to the second MAC device to change the rate at which the second
MAC device transmits data further comprises at least one of: an indication
to the second MAC device to reduce the rate at which the second MAC
device transmits data, and an indication to the second MAC device to
increase the rate at which the second MAC device transmits data.